

Math 112
LQuiz 05

2022-01-25 (T)

Your name: _____

Exercise

Consider the function

$$f : \mathbf{R} \rightarrow \mathbf{R} \quad \text{given by} \quad f(x) = x^3 + 3x^2 - 9x + 4$$

- (a) (3 pt) Compute the linearization of (aka linear approximation to) f at $x = 2$.
- (b) (1 pt) Use your linearization from part (a) to approximate the value $f(2.1)$. Given that the actual value is $f(2.1) = 7.591$, find the error in this approximation.